

ABSTRACT

Satellite Ocean Biology: Past, Present, Future

*Charles R. McClain, NASA/GSFC
Seminar presentation on 3/19/12 at North Carolina State University*

Since 1978 when the first satellite ocean color proof-of-concept sensor, the Nimbus-7 Coastal Zone Color Scanner, was launched, much progress has been made in refining the basic measurement concept and expanding the research applications of global satellite time series of biological and optical properties such as chlorophyll-a concentrations. The seminar will review the fundamentals of satellite ocean color measurements (sensor design considerations, on-orbit calibration, atmospheric corrections, and bio-optical algorithms), scientific results from the Sea-viewing Wide Field-of-view Sensor (SeaWiFS) and Moderate resolution Imaging Spectroradiometer (MODIS) missions, and the goals of future NASA missions such as PACE, the Aerosol, Cloud, Ecology (ACE), and Geostationary Coastal and Air Pollution Events (GeoCAPE) missions.